

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): David R. Cheriton

Assignee: Cisco Technology, Inc.

Title: MULTI-FEATURE CLASSIFICATION MEMORY STRUCTURE FOR
ASSOCIATIVE MATCHING

Application No.: 10/010,918 Filing Date: December 7, 2001

Examiner: Peling Andy Shaw Group Art Unit: 2144

Docket No.: CIS0119US Confirmation No. 6156

Austin, Texas
January 19, 2009

Mail Stop ISSUE FEE
Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Dear Sir:

In the Statement of Reasons for Allowance of the Notice of Allowance (dated October 19, 2009), the Examiner provided reasons for allowance of claims 1,7, 9-15, 17-22, 24-30, 32-38, 40-46, 48-54 and 56-68. In the Examiner's Statement of Reasons for Allowance, the Examiner stated:

"The closest prior arts of record issued to Uga et al. (US 6718326 B2) and Venkatachary et al. (US 20020089937 A1) together fail to teach or suggest "a method of processing a packet in a router comprising: creating a plurality of multi-feature packet processing rules, wherein said creating comprises, for each multi-feature packet processing rule of said multi-feature packet processing rules, forming said each multi-feature packet processing rule by merging a plurality of features according to a feature hierarchy, each of said features is defined in said feature hierarchy, at least one of said features in said feature

hierarchy comprise another of said features in said feature hierarchy, said at least one of said features in said feature hierarchy is a complex feature, said another of said features in said feature hierarchy is a simple feature, and said at least one of said features in said feature hierarchy subsumes said another of said features in said feature hierarchy; populating said plurality of multi-feature packet processing rules in a multi-feature classification memory; populating an associated content-addressable memory with a plurality of indices, wherein said indices are indices of said plurality of multi-feature packet processing rules in said multi-feature classification memory, said associated content-addressable memory and said multi-feature classification memory are associated with one another by virtue of said associated content-addressable memory being coupled to provide an index of said indices to said multi-feature classification memory, and each of said indices corresponds to at least one of said multi-feature packet processing rules; using said index to retrieve a multi-feature packet processing rule from said multi-feature classification memory; and processing said packet according to said multi-feature packet processing rule" in combination with all the elements of each independent claim as presented by Applicant [See page 2 through page 16 of applicant's amended received 03/11/2009]. Applicant argues that the prior art does not disclose or suggest the limitation combination of "said at least one of said features in said feature hierarchy is a complex feature", "said another of said features in said feature hierarchy is a simple feature" and "said at least one of said features in said feature hierarchy subsumes said another of said features in said feature hierarchy". This argument is considered persuasive as per 1st paragraph on page 23 through 1st paragraph on page 25 of applicant's amended received 03/11/2009." (Notice of Allowance, pp. 3-4.

As an initial matter, Applicants wish to express their appreciation for the allowance of claims 1,7, 9-15, 17-22, 24-30, 32-38, 40-46, 48-54 and 56-68. However, Applicants respectfully note that other points of distinction exist between the cited references and the claimed invention, in addition to those stated in the foregoing passages and elsewhere during the prosecution of the instant application. To wit, claim 1, taken as an example, recites:

1. A method of processing a packet in a router comprising:
creating a plurality of multi-feature packet processing rules, wherein
said creating comprises, for each multi-feature packet processing rule of said
multi-feature packet processing rules,
forming said each multi-feature packet processing rule by merging a
plurality of features according to a feature hierarchy,
each of said features is defined in said feature hierarchy,
at least one of said features in said feature hierarchy comprise another of said
features in said feature hierarchy,
said at least one of said features in said feature hierarchy is a complex feature,
said another of said features in said feature hierarchy is a simple feature, and
said at least one of said features in said feature hierarchy subsumes said another of
said features in said feature hierarchy;
populating said plurality of multi-feature packet processing rules in a multi-feature
classification memory;
populating an associated content-addressable memory with a plurality of indices, wherein
said indices are indices of said plurality of multi-feature packet processing rules in
said multi-feature classification memory,
said associated content-addressable memory and said multi-feature classification
memory are associated with one another by virtue of said associated
content-addressable memory being coupled to provide an index of said
indices to said multi-feature classification memory, and
each of said indices corresponds to at least one of said multi-feature packet
processing rules;

using said index to retrieve a multi-feature packet processing rule from said multi-feature classification memory; and
processing said packet according to said multi-feature packet processing rule.

Moreover, even while accepting the allowed claims in their present form, Applicants do not (and need not) agree with the characterizations espoused by the Examiner in the above passages, or at other points during the prosecution of these claims (and indeed, during the prosecution of the claims in the parent case of the present application). In so stating, then, Applicants maintain their position with regard to the cited references, as presented during the prosecution of this application.

CONCLUSION

Applicants therefore respectfully submit that the Examiner's Statement of Reasons for Allowance fails to accurately reproduce the language of the claims in at least with respect to the foregoing. The Examiner is invited to contact the undersigned at 512-439-5084, if there are any questions.

Respectfully submitted,

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